

**SECTION 03 54 00
CEMENTITIOUS FLOOR UNDERLAYMENT**

Addendum No 2 - March 19, 2009

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Cementitious underlayment.
 - 2. Floor primer.
 - 3. Testing.
- B. Related Sections:
 - 1. Section 09 65 16 - Resilient Sheet Flooring: Moisture emission tests.
 - 2. Section 09 68 00 - Carpeting: Moisture emission tests.

1.2 SUBMITTALS

- A. Product Data: Submit product data in accordance with Section 013300.
- B. Certification: Submit letter certifying that underlayment contains no gypsum material.

1.3 QUALITY ASSURANCE

- A. Installer's Qualifications: Apply underlayment by applicator authorized by manufacturer using approved mixing and pumping equipment.

1.4 DELIVERY, STORAGE AND HANDLING

- A. General Requirements: Deliver materials in their original, unopened packages, protected from exposure to the elements. Remove damaged or deteriorated materials from the premises.

1.5 SITE CONDITIONS

- A. Environmental Requirements: Before, during and after installation of underlayment, enclose and maintain building interior at a temperature above 50 degrees F and below 100 degrees F until structure and subfloor temperature are stabilized.

1.6 COORDINATION

- A. Coordinate with Section 09 65 16 - Resilient Sheet Flooring and Section 09 68 00 - Carpeting for moisture emission tests required by finish flooring manufacturers and with other trades as required to insure proper interfacing and sequencing of installation. Verify floor requirements at areas of underlayment.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Self-Leveling Cementitious Poured Floor Underlayment:
 - 1. Ardex K-15 Cementitious Underlayment; Ardex, Inc., Coraopolis, PA. (612) 264-4240.

2. Levelrock Floor Underlayment 4500; United States Gypsum Company, Chicago, IL 800-487-4431
 3. Latilevel 86; Laticrete. (ADD 2)
 4. Or equivalent (ADD 2)
- B. Self-Leveling Concrete Poured Floor Topping: Ardex K-500 or A-300 Pourable Concrete Topping by Ardex, Inc., Coraopolis, PA. (612) 264-4240.
1. Equivalent Products:
 - a. Levelright FS-10; Maxxon Corp. (ADD 2)
 - b. Levellayer III; Dayton Superior. (ADD 2)
 - c. Or equivalent. (ADD 2)
- C. Aggregate: Well washed, graded, fine gravel or larger aggregate as recommended by underlayment manufacturer for use intended. Provide with primer and finish coat at thicker areas.
- D. Mix Water: Potable, free from impurities.
- E. Subfloor Primer: High strength floor primer as recommended by underlayment manufacturer for use intended.

2.2 MIX DESIGNS

- A. General Requirements: Mix proportions and methods in accordance with product manufacturer recommendations.

PART 3 EXECUTION

3.1 PREPARATION

- A. Condition and Cleaning of Subfloor: Ascertain structurally sound subfloor. Clean subfloor to remove mud, oil, grease, and other contaminating factors.
- B. Allow floors to thoroughly dry. Installation indicates acceptance of floor condition.
1. Comply with ASTM F1869 Supplemental Test Standards, moisture emission test for areas, three tests for areas up to 1000 square feet and one test for each additional 1000 square feet.
- C. Leak Prevention: Fill cracks and voids with quick setting drywall patching material (when allowed) where leakage of underlayment could occur.
- D. Priming Subfloor: Prime concrete subfloor using subfloor primer. Multiple coats may be necessary.
- E. Bonding Agent: Apply bonding agent as recommended by manufacturer for area as required for intended use.
- F. Expansion Joints: Allow joints to continue through underlayment at same width.

3.2 APPLICATION OF CEMENTITIOUS FLOORING

- A. Scheduling: Do not begin underlayment application until the building is enclosed including roof, windows, doors, and other fenestration. Install after drywall installation unless tenant finish requirements identify partitioning after the pour.
1. Submit product data and certification as specified.
 2. Insure that underlayment contains no gypsum material.
 3. Where indicated, slope to drain.

- B. Application: Place underlayment from 3 inch to feather edge. Spread and float to smooth surface. Except at authorized joints, place underlayment as continuously as possible until application is complete so that no underlayment slurry is placed against underlayment product that has obtained its initial set.
- C. Drying: Provide continuous ventilation and adequate heat.

3.3 PREPARATION FOR INSTALLATION OF GLUE DOWN FLOOR GOODS

- A. Priming: Prime all areas to receive glue down floor goods, and floor areas where surface has been damaged. Clean and prime damaged floor areas. Where floor goods manufacturers require special adhesive or installation systems, their requirements supersede these recommendations.
- B. Floor Goods Procedures: Verify with underlayment manufacturer for guidelines for installing finished floor goods.

3.4 FIELD QUALITY CONTROL

- A. Moisture Test: Test floor slab for moisture using ASTM F1869 Supplement Test Standards, moisture emission test for areas - three tests for areas up to 1000 square feet and one test for each additional 1000 square feet.
- B. Slump Test: Test underlayment mix for slump as it is being pumped using 2 inch by 4 inch cylinder resulting in patty size of 9-1/2 inches to 10-1/2 inch diameter.
- C. Field Samples:
 - 1. Ardex K-15: Take entire unopened bag to independent testing facility to perform compressive strength testing in accordance with ASTM C 109/modified: air-cure only.
 - 2. Levelrock: Obtain at least one set of 3 molded cube samples from each day's pour or every 10,000 square feet. Test cubes in accordance with ASTM C472.

3.5 PROTECTION

- A. Protection from Heavy Loads: During construction, place temporary wood planking over underlayment wherever it will be subject to heavy wheeled or concentrated loads.

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